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No 1-2

January-February 2008 - Volume 34

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SICK

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World innovation contactor monitoring relay CMD:



The CMD from Moeller makes the expensive redundant design of contactor circuits in safety-relevant controls obsolete, by monitoring the main contacts on a contactor for welding. To accomplish this, the CMD compares the control voltage of the contactor with the state of the main contacts, which are reliably signalled with a mirror contact (IEC EN 60947-4-1 Annex F). If the contactor coil is de-energized and the contactor drops out, after a short delay, the CMD will trip the upstream circuit-breaker / motor-protective circuit-breaker or switch-disconnector using an under-voltage release. The CMD also monitors the functional capability of the internal relay. An additional auxiliary switch of the monitored contactor serves this function. For this purpose the auxiliary N/C contact and N/O contacts are positively driven, where the latter is a mirror contact.

Quicklink-ID: IEN028 at www.moeller.net

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New NZM circuit-breakers with thermomagnetic releases for DC applications.

The new NZM-A circuit-breakers are the ideal protective devices for DC networks with operating voltages up to 750 V and operating currents up to 500 A. The provision of thermomagnetic release systems ensures accurate detection of r.m.s. values for operating and fault currents. The double break contact systems allow safe switching in high current networks with short circuit currents of up to 70,000 A. Thanks to the high DC-3 utilisation category, the switches can be used everywhere: this ranges from photovoltaic applications, to standby batteries to the demanding switching and protecting of DC shunt wound motors for reversing or inching.

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Quicklink-ID: IEN038 at www.moeller.net



New 4-pole Xstart contactor



The new 4-pole contactors from Moeller are optimised for AC-1 switched loads. They are the specialists for applications where the mains is switched off or over, where heating systems are switched and where 4-pole loads are switched.

- Four compact contactors to 200 A.
- Identical size for AC and DC operated contactors as well as a common range of accessories for 3 and 4-pole contactors guarantee efficient and simple engineering.
- Easily accessible coil connections on the front and comfortable box terminals for fast and safe wiring.
- Low holding power with DC operated contactors reduces the heating in the control panel.

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The new NZM-C: perfect protection – in every application area



The new NZM-C from the Moeller Comfort series

Inexpensive switching and protection with the new comfort series

The four switching capacity classes of Moeller's new Comfort series enable users to adapt the switchgear even more effectively to the tasks at hand. The inexpensive circuit-breakers with a short-circuit breaking capacity of 36 kA and rated currents of 20-500 A are suitable for the most typical standard applications and are even the first choice for networks with transformers up to 1600 kVA. They are based on the high-performance type of Moeller's latest NZM series and are also provided with the optimum features of this series in terms of systematic design and simple handling.

- Safe switching in networks with up to 36 kA ICU = ICS at 400/415 V
- With a comprehensive range of accessories

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Connecting instead of wiring.

xStart

Clever and simple with SmartWire.



SmartWire simply replaces the complete control wiring by integration of the I/O level in the switch-gear. A SmartWire module is easily snapped onto the standard contactor for this purpose. Up to 16 motor starters can be interconnected to a gateway with plug-in SmartWire cables. The starters are configured at the touch of a button. Moreover, direct fieldbus connection to Net, CANopen or Profibus DP is child's play via a SmartWire gateway.

Darwin Technology. The easy way to connect.

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INDUSTRY NEWS

Beijer Electronics acquires Westermo



Beijer Electronics announced the strategic acquisition of the Swedish company. Westermo develops and manufactures industrial data communications products, such as switches, routers, fiber optic modems and modems for local networks as well as for wireless communication, and has a leading-edge competence in industrial applications. Westermo has an estimated global market share of five per cent, with a strong presence in Europe where the major markets are serviced through wholly-owned subsidiaries. "The acquisition of Westermo is a strategically important step in the continuing development of the Beijer Electronics group. Westermo's broad product portfolio and high organic growth complement and strengthen Beijer Electronics' offer within industrial automation and infrastructure applications", says Göran Sigfridsson, CEO of Beijer Electronics Group.

Changes at Siemens

Siemens plans to organize its operations in the three sectors: Industry, Energy and Healthcare into 15 Divisions as of January 2008. "This new and more focused company structure will further increase our profitability and transparency. Clear responsibilities will ensure that we are faster in the market and closer to our customers," said Siemens President and CEO Peter Löscher. The Industry and Energy Sectors will each have six Divisions, and the Healthcare Sector three. The new global heads of the Divisions will be announced early in December. The Industry Sector will be headed by Heinrich Hiesinger and comprises six Divisions: Industry Automation, Motion Control, Building Technologies, Industry Solutions, Mobility and Osram.

Harting and Nexans to co-operate

Harting has confirmed the signing of a co-operation agreement with Nexans, the world market leader in the cable industry. This partnership is a response to the rising demand for intelligent solutions in the field of industrial automation and will enable both companies to offer a comprehensive range of products in the marketplace. The two companies are already producing active systems for Ethernet networks. The partnership amalgamates Harting's expertise in producing and marketing Ethernet network solutions for industrial automation and the Nexans knowhow in the development of hardware and software for office applications. The concept of Automation IT, which aims to facilitate the seamless end-to-end provision of data in communications networks, serves as a common denominator in this co-operation. This is where office IT and industrial systems merge to deliver efficient solutions to ensure maximum transparency.

Vacon to establish subsidiary in USA

The drives manufacturer Vacon will establish a new subsidiary in the USA. The subsidiary will also integrate TB Wood's AC drives business into the group. Mr Dan Isaksson has been appointed President of Vacon, Inc. "After the acquisition of the AC drives business of TB Wood's and establishing a subsidiary in the USA, Vacon is a truly global company. We will have sales on all continents, and R&D and production on three continents," says Heikki Hiltunen, Executive Vice President, Vacon.

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Small PLC

with an integrated colour touchscreen

The Vision350 incorporates all colour-advantages into a compact all-in-one PLC/HMI device. This PLC and enhanced HMI is equipped with a colour touchscreen, an improved processor, and diverse I/O options. Adaptable to most TCP/IP/serial protocols, it offers communication features, such as Ethernet connection via TCP/IP, GSM/SMS/GPRS, MODBUS, CANopen & UniCAN, and also includes free remote access utilities. The functioning HMI features a 3.5" display, capable of supporting 3MB of application memory for images, and 512K for fonts, allowing about 250 images and 1024 displays per application. Five programmable keys allow customization of function and layout. Enhanced programming features include trending, built-in alarm screens and easy HMI language support. This high-speed PLC allows for 1MB of logic memory, and a scan time of 15µsec per 1K of typical application.

UNITRONICS

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Modular Switch

4 gigabit ports



The EDS-728 switch can upgrade Turbo Ring or Ring Coupling topology to gigabit-level: 2 gigabit ports can be used for gigabit TurboRing™ to guarantee a recovery time under 50ms, and the other 2 gigabit ports can be used for gigabit uplink or gigabit downlink. The 4 gigabit ports can also be used for gigabit Ring Coupling, Dual-Ring, and Dual-Homing to ensure network reliability and enough bandwidth for communication between two rings. It features industrial design with no moving parts, dual power inputs, high MTBF, DIN Rail or wall mount options. The management options include IGMP Snooping for multicast applications, VLAN, SNMP and RMON, the required security features for port locking, user authentication and secure remote management.

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Linear Image Sensors

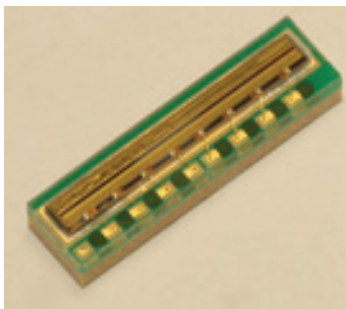
surface mounted

The surface mount CMOS linear image sensors are aimed at high volume, automated assembly applications. The new S10226 has 1024 pixels on a 7.8 micron pitch with 125 micron pixel height. Each pixel has an aspect ratio of 16:1, which gives 16 times more light collection area compared to conventional linear CCDs used in consumer type scanners and barcode readers. This provides the user with greater sensitivity with no increase in cost. The CMOS arrays incorporate 1024 individual photodiode elements with buffer amplifier, digital shift register (multi-plexor) and signal processing circuit (correlated double sampling noise reduction circuit) all on the same monolithic silicon chip. These devices also provide all the necessary clock generation functions on chip, enabling system design and implementation easier compared to traditional CCD technology.

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ABB Robot Connection

The CC-Link unit offers an interface between the CC-Link bus and the ABB Robotic internal CAN bus. It is regarded as an 'intelligent device' by the CC-Link PLC. The CC-Link unit is connected to the CC-Link PLC by a twisted pair cable with shield.



- Direct connection to ABB robot controllers
- Fast data transfer
- Seamless integration of ABB robots to integrated manufacturing solutions

ABB



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Hilscher interface card

The CIF 50-CCS, CC-Link interface is a PCI card for use in the standard PC environment. Drivers for Windows, Linux and QNX are available.



- Fast "Time to Market"
- Cheaper than own development
- Easy installation and configuration
- MFP3 LSI technology

Hilscher



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Mitsubishi Electric I/O Module

The new ST1H-BT head station offers CC-Link users a flexible low-cost solution for all remote slice I/O needs. A wide selection of I/O types is available with networks speeds up to 10 Mbps. Features include:



- Version 2 CC-Link supported
- Online module changes
- Automatic network parameter optimization
- Simple set-up and diagnostics using GX configurator ST

Mitsubishi Electric



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New 1 Gbps Open Ethernet

Industrial Ethernet has taken a huge leap forward with CC-Link IE, offering a 10 fold increase in communication speed to 1Gbps (gigabit per second).

CC-Link IE combines the best of many existing technologies and applies them to an optical industrial network system with a redundant architecture. This enables extremely high-speed and reliable data transfer between field devices and other controllers via Ethernet links.



- First open standard 1Gbps manufacturing network
- High speed, deterministic networking
- Seamless data transmission

CC-Link Partner Association (CLPA)

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Patlite Signal towers

Patlite offer a range of CC-link connectable signal towers. These highly versatile indicators can connect directly onto CC-Link without any interfacing. CC-Link can directly control all indicator segments and audio alarms without any additional cabling.



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| 0-65W | (P)XY-F(W) | 47-63 Hz | 3-30 VDC | 1 |
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| 180W | GT-3S180(P)XY (W222E, W2U, W) | 87-264 VAC, 47-63 Hz | 1-48 VDC | 1-4 |
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Processor Blade

very low power consumption

The cPCI-3600 is specifically designed to operate at a very low power consumption of less than 10W at full loading. The series offers two 10/100 Ethernet ports and an onboard 2.5" hard drive for versatile automation and transportation applications that require reliable network connectivity and efficient remote management. Designed in a dual-slot form factor, the cPCI-3600 series memory configuration options of 256MB DDR 400 MHz memory (soldered) and one SODIMM socket that supports up to 1GB of RAM. The cPCI-3600 also provides two 10/100 Ethernet ports, an onboard 2.5" IDE HDD port, one CompactFlash socket, two USB2 ports, two serial ports, one parallel port (SPP/ECP/EPP), one PS/2 keyboard/mouse interface, and an AC'97 audio interface. The cPCI-3600 also supports analogue display resolutions up to 1920x1440 32-bit at 85Hz.



ADLINK TECHNOLOGY

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LVDT Stroke Transducer

for servo hydraulic applications

The digital LVDT (linear variable differential transformer) stroke transducer for position control systems is designed to provide reliable, fit-and-forget position sensing with high resolution, good linearity and long service life. The new digital linear stroke transducer is especially suitable for servo hydraulic applications. The unit matches existing analogue systems without adaptation and provides precision in relation to linearity deviation and temperature drift. The transducer process identifies and then changes the measurable variant, which is then processed and adjusted to the same speed as an analogue sensor to within a limited frequency of 500Hz. The linear system can be either flanged to a solenoid or any other object to be measured. The core, which can be moved within the coils, has to be connected to the object to be measured via the threaded pin. In this way, users obtain a complete hi-tech system to evaluate voltage and provide a highly defined output signal.



MAGNET SCHULTZ

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For SLI: enter 21262 at www.tim-info.com/ien

Split-core Transducers

for bipolar measurement of DC currents

The DH family of DC current transducers offers precise measurement of bipolar currents up to 2000A. Measuring 174 x 86 x 54.1mm, these transducers combine Hall-effect technology and signal conditioning in a single housing with a large rectangular sensing aperture for non-contact measurement. These transducers measure DC currents and their polarity. It offers a choice of primary current measurement ranges from 500A to 2000A and provides an accuracy better than 1 per cent of the nominal current value. The transducers output the bipolar measurement value through an industry standard 4-20mA output. They feature a loop-powered circuit (adapted to 20-30VDC power supplies) that reduces installation costs by minimizing the wiring and connections required. Applications include management of UPS systems and standby batteries, DC power generation and distribution as well as monitoring DC motors and process control systems.



LEM

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A/D Converter

12-bit resolution, 16 input channels

The AS1542 is a multi-channel successive-approximation ADC offering a high 12-bit resolution on each of the sixteen input channels. At a conversion speed of 1Mps the AS1542 uses as less as 2.4mA, while in automatic shutdown mode the supply current drops to less than 0.5µA. The 16 input channels are software configurable as 16-channel single-ended or 8-channel fully-differential analogue inputs. Additionally, a sequencer and channel counter allows continuous or single conversions on selected channels without further user input and interruption of conversions while reprogramming the ADC. This allows the channel selection function to be altered while the sequence is in progress. The AS1542 operates from a single 2.7 to 5.25V supply and contains a Vdrive function which enables the serial interface to connect directly to either 3 or 5V processor systems independent of the ADC's supply voltage.



AUSTRIAMICROSYSTEMS

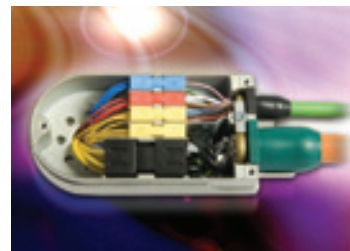
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For SLI: enter 21436 at www.tim-info.com/ien

Servo Motor Connectors

for higher power requirements

The Cm5 connectors feature a highest maximum current of 40A for motor flanges of up to 150x150mm. Designed as a replacement for two circular connectors, the connectors benefit from a minimum size package and can be installed simply. Compared to conventional circular connectors, the devices feature 50% less weight and require only half the length to house the same components. The low profile design makes the devices ideal for small servo motors requiring higher power in applications where space is at a premium such as industrial motion control, robotics, factory automation and material handling. Benefiting from only one housing, Cm5 connectors use a 4-way (3 phase + 1 ground) power connector plus a signal connector offering several configuration options: 4-way sensor and brake or 18 or 24-way signal. The devices offer a maximum voltage of 630VAC for the power connectors.



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Dimmer Terminal

with switchable output of up to 600W

The KL2761 dimmer Bus Terminal is intended for direct connection of different lighting devices, such as incandescent lamps as well as inductive and electronic ballasts. The lighting devices are detected and controlled in the correct operating mode. Integrated diagnostics indicate the operating status by means of LEDs and make the status data available via fieldbus systems. The electronic dimmer is compact and is equipped with automatic load detection. It can switch numerous lighting devices with a wearfree design. The brightness values of the lighting system can be modified via the controller process data based on any supported bus system. The operating states are evaluated by the integrated diagnostics, indicated by LEDs and made available to additional applications via the bus system. The dimmer terminal automatically detects the type of load and calculates the correct phase control angle. The result is stored in the Bus Terminal.



BECKHOFF

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Side Exit Accelerometer

with integral cable

The 787F is side exit sensor providing protection in the harshest environments. The accelerometer's integral cable is permanently mounted, eliminating a common concern that contaminants can get into the connector. Dirt, oil, grease, water, dust, and other contaminants found in the harsh industrial environment can cause an electrical short, erratic or erroneous readings, and corrosion. In addition to improving sensor reliability, the cable eliminates concern about the connector backing off the sensor. The connection integrity is critical for inaccessible sensor locations such as inside a gearbox, machine tool monitoring, and underwater applications, like vibration monitoring inside tanks or on submersible pumps. The low profile sensor is designed with a side exit connector and captive screw, for easy installation in confined areas. It is a fully welded construction, making the sensor truly hermetically sealed to 1x10⁻⁸ cc/sec. This allows the sensor to maintain its performance at temperatures up to 120°C.



WILCOXON RESEARCH

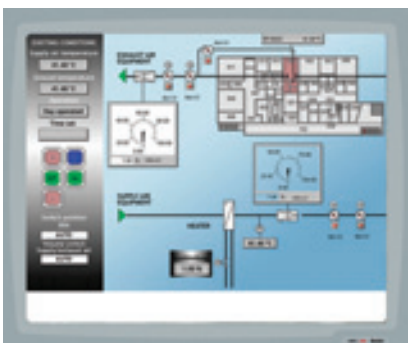
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Industrial Embedded PCs

robust and high-performing

The EPCs are suited for complex machine control and process visualization in tough industrial environments where maximum reliability and high performance is required. The high reliability is achieved thanks to the shock-absorbing hard disk and other vibration resistant features such as expansion slots with solid card holders. The PCs feature industrial class fan-less CPU performance and multiple communication ports and expansion slots provide many options for networking and updating, making this an ideal HMI for machine builders and system integrators alike. The line consists of three models with high-contrast TFT touch displays of 15, 17 and 19 inches respectively. The EPC feature Intel Celeron Mobile 1.3 GHz processors and Windows XP Professional Multilingual User Interface.



BEIJER ELECTRONICS

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Motor Protection Relay

for tri-phase supply network motors

The EPS relay does not need assembling additional current measuring transformers. Thanks to usage of microprocessor technique, the relays are characterised by high measuring accuracy and thermal curve stability. The microprocessor based on relay is adjusted to assembling in power distribution boxes on TH35 rail. It is appropriate for tri-phase supply network motors protection. It performs overload-thermal protection, thermal protections during motor start, asymmetrical load protection, ground fault protection, motor stall protection and phase decay. This relay controls the overload in all three phases. According to adjustment made by the user it realises proper protection characteristic. There is a possibility to choose manual or automatic working mode. According to an advanced processing algorithm the relay measures real root-mean-square value correctly even with currents reshaped by higher harmonics even with high overloads (up to 10 times).



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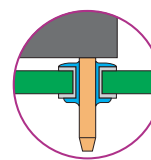
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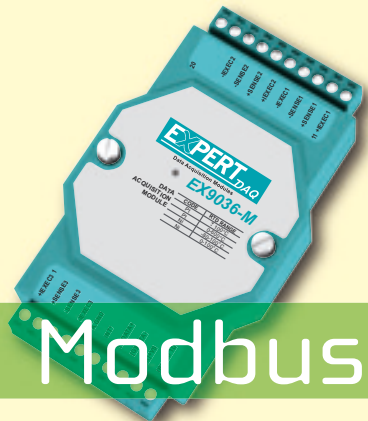
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Outdoor Interface Solutions for harsh environments

This range of products for outdoor solutions combines the ideas from the existing PushPull technology and Han3A housings, with innovative fibre and copper based inserts. This integration of the standard LC fibre optic connectors, in singlemode and multimode, is well-suited for the demands of harsh environments. The hybrid options combine data (LC fibre or RJ 45) and power in one connector for improved maintenance and installation. All the interfaces offer vibration protection and IP 67/65 as standard.



HARTING

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Industrial Device Servers with redundant and PoE ports

This series of industrial device servers offer a wide temperature range, surge and isolation protection and redundant power inputs, making the devices well-suited for use in harsh environmental conditions. The series offer a variety of operations modes including Virtual COM, TCP Server/Client, UDP, and Serial Tunneling. They can be configured via an easy-to-use utility for Windows or via HTTPS/SSH. The devices are equipped with 2.5KV optical isolation protection and 15kV ESD surge protection of serial interfaces.



SUNIX

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For SLI: enter 21902 at www.tim-info.com/ien

Linear Stage

50Nm incremental motion capability

The AG-LS25 is a high-precision miniature powered by an Agilis piezo step direct motor. The piezo motor is directly coupled to the moving carriage with no intermediate screw or gear. When idle, the motor holding force locks the position for true set-and-forget, long-term stability. In contrast to ultrasonic motors, the Agilis motor makes small incremental adjustments more predictable with a 50Nm incremental motion capability.



MICRO-CONTROLE SPECTRA-PHYSICS

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For SLI: enter 21903 at www.tim-info.com/ien

Miniature Slide Switches fit in tiny spaces

These miniature slide switches feature a very low profile and are well-suited where space is at a premium, for example in mobile telecommunications, computers and remote control equipment. The JSM series miniature slide switches benefit from actuators which are only 2.5mm high. Designed for an operating temperature range from -10 to 60°C, JSM series slide switches can withstand a shock/vibration to of 10 to 55Hz 1min sweep.



C&K COMPONENTS

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For SLI: enter 21214 at www.tim-info.com/ien

Vector Inverters flexible for integration

The SieiDrive ADV200 line is the next generation of vector inverters in the ART-Drive family. With mechanical modularity and completely open programming architecture, it offers flexibility of integration and maximum performance in any system architecture used for modern automation. Custom menus and dedicated application SW give complete machine control at all user levels thanks to specific advanced functions and integration in standard IEC61131-3 programming environment. With a power range from 0.75kW to over 1.5MW it is available for universal mains power supplies.



GEFRAN

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Lifting Column stable and tip-resistant

The hamatic lift lifting column is available in several lengths designed to steplessly lift and lower cantilevered and heavy loads. It is used in industry for working and assembly tables. Tip resistance and stability are ensured by the large column cross-section and precise guidance. The telescopic drive enables a lifting torque of up to 5,000N and traversing speeds of up to 32mm/s which remains virtually constant at rated load. Different control options provide the user with highest possible comfort. The lift has an aesthetic design and does not need any additional covering.



HANNING ELEKTRO-WERKE

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For SLI: enter 21364 at www.tim-info.com/ien

System Power Supply in metal cover

The RPS-120 power supply for automation systems is designed for direct mounting on 35mm DIN rail mount. The unit has 2 input and 4 output terminals. The switching frequency is fixed at 55 kHz. It features AC input range selectable by switch, LED indicator for power on, 100% full load burn-in test. The device provides high efficiency and low dissipation, low noise and interference. It is cooled by free air convection. The supply is compliant with safety standards UL60950-1, TUV EN60950-1 Approved, design refer to EN50178.



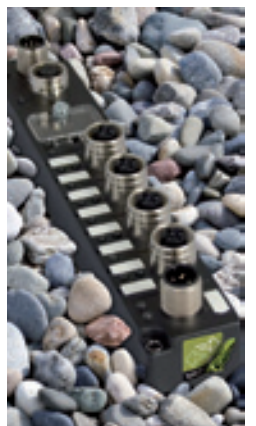
RELPO

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For SLI: enter 21987 at www.tim-info.com/ien

Digital Mixed Module robust, IP67-rated

The VARAN digital mixed module PVD085 is an IP67-rated I/O module with eight digital channels that can be configured as in- or outputs (24V/0.5-2A). The device is protected against short circuits. The maximum continuous current allowed is 4A. The device has an integrated distributor function for extending the VARAN bus. Each I/O socket is monitored for short circuits in the sensor voltage supply. The status is shown using LEDs and can be read back.



SIGMATEK

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For SLI: enter 21429 at www.tim-info.com/ien

Condition monitoring system prevents unplanned downtime at cement maker

The online condition monitoring and training help manufacturers in the cement industries to eliminate unscheduled shutdowns and avoid repairs to transmission gears, gearboxes and other critical rotating plant and machinery.



Spenner Zement produces a range of cement, lime and dry mortar products. The company also develops disposal concepts for different industry sectors whose waste products can be used for secondary raw materials and fuel. The company operates several cement mills (tube mills) at its Erwitte site in Germany. Back in 2002, Spenner faced a production problem on one of its cement mills at Erwitte. One of the tube mills had to be shut down for three weeks because of damage to a gearbox that was driving the mill. At the time, the three-stage gearbox was being monitored by a temperature sensor, which failed to give Spenner's maintenance team enough warning of damage to the gearbox. The gearbox damage and subsequent failure not only resulted in three weeks of unplanned downtime on the tube mill, but also resulted in costly repairs, which included a completely new shaft and refurbishment of parts of the gearbox housing.



Spenner then called in experts from FAG Industrial Services (F'IS), the maintenance and condition monitoring company within The Schaeffler Group, to help eliminate any future unplanned stoppages to its tube mill. F'IS recommended its online vibration monitoring system, FAG DTECT X1, along with four, permanently-installed sensors positioned on the main gearbox and reduction gear. Three sensors were installed on the main gearbox to monitor the gear bearings and gear mesh, with one sensor installed at the reduction gear to monitor

gear rim and pinion condition. In addition to installing the system and sensors, three months' vibration monitoring training was also provided. Spenner maintenance engineers were trained to analyse the condition monitoring data and are now capable of monitoring and analysing the data on their own.

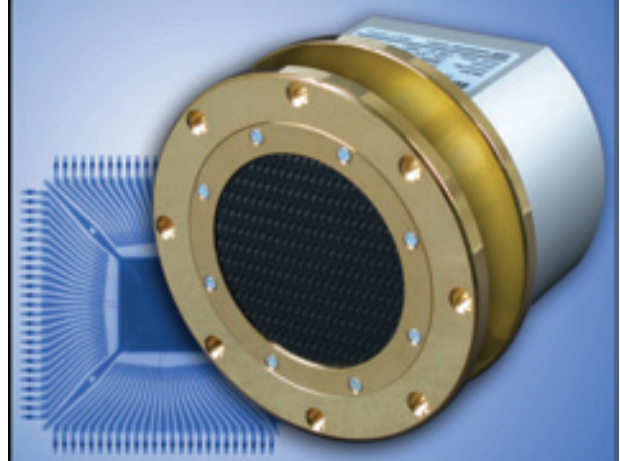
In 2004, around 18 months after installing the new condition monitoring system, the monitoring system detected damage to the gear teeth in the gear mesh. Initially, yellow alarms were displayed on the system, followed by temporary red alarms, indicating potential serious damage. Visual inspection from Spenner engineers confirmed that tooth damage had occurred in the second stage gears. The gearbox was subsequently replaced during the next scheduled shutdown period, without causing any disruption to production. Had the tooth damage been left undetected, damage to other parts of the gearbox may have occurred, causing costly repairs and further delays to production.

In 2006, Spenner equipped another two of its cement tube mills at Erwitte with monitoring systems. Five sensors are installed on each system, with three monitoring the vibration on the rolling bearings and the gear teeth. The other two sensors monitor vibration at the reduction gear bearings, girth gear and pinion. All data is transmitted directly to Spenner's central control room at the plant, automatically triggering an alarm if deviations from pre-set parameters are detected. Although several Spenner engineers are now fully trained to analyse the collected data, when initial signs of complex problems are detected, data can be emailed direct to F'IS experts who can carry out in-depth analysis on the data and recommend the appropriate action to be taken. By analysing the data sent to them, F'IS experts not only detect the problem, but also can pinpoint the damaged component. For example, the type of damage and how quickly the damage progresses, provides valuable clues for maintenance planning teams. Thanks to early detection, special replacement parts can be purchased in time and replacement can be carried out during routine, planned maintenance intervals.

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| CCD-5000F NEW | 2448x2048 | 12 | 48 | ✓ | |
| CCD-4000 UPDATE | 2048x2048 | 7.5 | 60 | ✓ | ✓ |
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| COOL-1300Q Cooled down to absolute -20°C | 1280x1024 | 12.5 | 65 | ✓ | ✓ |
| HCC-1000 High speed CMOS with 1GB memory | 1024x1024 | 462 | 48 | ✓ | — |
| CMC-1300 High speed CMOS with preprocessing | 1280x1024 | 485 | 48 | ✓ | ✓ |
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All cameras utilize progressive scan sensors and can be equipped with one of the following 12 (14) bit interfaces:

- RS644 (LVDS)
- Camera Link
- IEEE1394 (FireWire)
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For SLI: enter 21377 at www.tim-info.com/ien

Condition Based Monitoring

precise positioning for two axes

The AIC212 module provides measurement data acquisition for condition monitoring that can be fully integrated in conventional control system. The module permits the connection of up to nine piezo acceleration sensors via the ICP interface. In order to be able to include additional physical quantities such as forces, currents or power in the synchronous scanning, the module in addition provides three channels for the $\pm 10V$ standard signal. All 12 analogue inputs permit scanning with up to 50kSamples/sec with the measurement data being transferred directly via hardware to local memory. An incremental interface input or initiator inputs are available to take account of the position reference or order analyses. A standard CPU from the M1 system takes care of the evaluation of the data. Instead of forcing the evaluations into a rigid corset, the possibility of individual design of the analysis software is offered.



BACHMANN ELECTRONIC

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For SLI: enter 21416 at www.tim-info.com/ien

Measuring System

multiple head solution

The new MHS-Angle Measuring System offers high accuracy for swivel or rotating axes and rotary tables. Calibrating the encoder ring scale during the initial installation start up is simple by temporarily mounting a secondary encoder head and rotating the Ring Scale axis. Accuracy errors related to mechanical installation, disc eccentricity, and bearing run-out are removed in an economical way. As an example, a 162mm diameter encoder ring scale can have an installed accuracy of finer than ± 3 arc sec. Larger diameter encoder ring scales would have even better installed accuracy. The integration of the encoder ring scale directly onto the rotating part, very close to the bearing and without a mechanical coupling is the best solution for precision positioning and high accuracy. With an IP67 rating (fluid submersible), the ring scale can be mounted in an area where there are fluids such as oil and grease without affecting reliability or accuracy.



AMO

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For SLI: enter 21856 at www.tim-info.com/ien

Ohmmeter

1 $\mu\Omega$ resolution

The C.A 6240 is a high-performance 10A micro-ohmmeter with a resolution of $1\mu\Omega$. Indispensable for testing the quality of links, contacts and surfaces, this instrument is suitable for use upstream, for instance in developing prototypes, as well as downstream, for preventive maintenance. In particular, it can be used to check the resistance measurements on machine coils, transformers, and contacts, as well as earth continuity, etc. The C.A 6240 micro-ohmmeter weighs 5kg and is a robust, leakproof, on-site multimeter suitable for use in the field, in the workshop or in the laboratory. Its wide LCD screen with 2 digital displays is easy to read. It includes numerous indications designed to help when taking and interpreting measurements. The automatic measurement mode proposed makes the instrument even simpler to use: measurement can be triggered without even pressing a key.



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Safety Camera

offers hassle-free guarding

The V300 is a practical camera solution for point of operation guarding, reducing the number of parts and installation time required by traditional safety light curtains. Suitable for rectangular openings and access points, the installation process could not be easier. Simply mount the V300 in the most convenient corner of the opening, apply the rugged reflector strip along two opposite adjacent lengths and press the teach button. The reflector strip forms a background target for the V300 and the device has a detection capability equivalent to a 20mm resolution light curtain. The device can cope with dirt build up and what would appear to be serious scratching or damage to the reflective strip before it needs replacing. For larger openings or machines that require guarding on two adjacent sides, a pair of V300 units can be synchronised together to offer greater flexibility than normally achieved using traditional optical light curtains.



SICK

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For SLI: enter 21418 at www.tim-info.com/ien

Humidity Transmitter

with integrated data logging

The Humicap Series HMT330 humidity and temperature transmitter now offers several new features including a data logging option, Chinese as a new user interface language, the new generation Humicap 180R sensor and a USB connection cable for computers. The device has a new display with a white background light for easier reading. The data logging option is a module that is slotted into the transmitter. The module has an enhanced memory that can store data of three measured parameters. When logging is fixed at 10 second intervals, data can be stored for as long as 4 years and 5 months. A real-time clock with a battery backup ensures accurate date and time stamps even when no power is supplied to the transmitter. The logging feature does not require any pre-setting; data is ready and available when needed. The stored data can be viewed graphically on the display throughout the logging period, and the user can zoom in and out as necessary.



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Multi-function Controller for flow, pressure and temperature

The eControl 8611 is a modular control system designed for seamless integration into multiple closed loop cooling systems. The unit integrates P.I. and cascade temperature control, has multiple input and output possibilities and offers two way communications with PLCs or other controllers. The flow controller integrates sensor and controller into a single housing and all units provide actuation of process and proportional valves from one consolidated controller. The controller offers the benefit of working with pneumatically or electrically driven systems. Its compact design allows uncomplicated installation, as an integral part of the flow sensor, or as a wall, or DIN-rail mounted controller. The unit offers users the choice of 4-20mA, external frequency and PT100 (RTD) inputs and the flexibility of 4 analogue or digital outputs to enable customisation.



BÜRKERT

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For SLI: enter 21394 at www.tim-info.com/ien

ESD Event Detector for manufacturing environments

The 900 ESD event detector is a diagnostic tool for manufacturing environments that are sensitive to electrostatic discharge (ESD), including electronic, semiconductor & medical device manufacturing and assembly. It identifies incidents or verifies suspected areas of ESD activity within a manufacturing site. A voltage-sensitive antenna on the unit can be positioned near potential problem areas (where electrostatic discharge is suspected) to monitor ESD events. Detection is conveyed via an audible buzzer and/or a visual colour-coded light display which depicts intensity. By detecting ESD events, the device serves to alert manufacturing engineers to the presence of potentially harmful (and invisible) electrostatic charging. Such identification is often the first step in managing ESD. Once alerted to its presence, action can be taken to rectify the situation and thereby improve overall efficiency, yield and productivity. The detector is compact, portable and is powered by batteries.



TREK

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For SLI: enter 21936 at www.tim-info.com/ien

Digital Indicator easy to read

The new E3000plus 1/8 DIN indicators combine state-of-the-art technology with simple operator interface to provide clear identifiable information. These indicators come with several alarm options and an RS485 communication board can be fitted, offering full integration with most instrumentation, including industry standard MODBUS. These indicators feature touch sensitive keys, easy to read green or red display and comprehensive set-up and configuration modes. Universal input selection: T/C, RTD, VDC, mADC. A 24Vdc transmitter power supply PCB is also available. The indicators can be configured for up to 30 different engineering units. They include a choice of labels which the user can apply inside the display to clearly define what is being monitored. The micro-processor control offers accurate indication in most environments. Max, min and alarm status LEDs are included and unauthorized users can be locked out of changing alarm values and engineering units through a standard security PIN system.



ELETTROTEC

Tel. +39-02-28851811 • Fax +39-02-28851854

For SLI: enter 21857 at www.tim-info.com/ien

Thermographic Camera 35µm pixel detector array

The VIGOCam v50 camera is designed for temperature distribution measurements and recording in technological device diagnostic. It can be used in various scientific and industrial applications. The camera is constructed with the use of a 384x288 microbolometric detector array. The new generation, 35µm pixel, detector array and excellent optics ensure high thermal sensitivity (NETD: 0.08°C @ 30°C) and spatial resolution (1 mrad) of the camera. The camera is equipped with 3.5" LCD display, video camera, laser pointer, radio link that enables remote control, SD memory card reader, microphone and loudspeaker. Connection with a PC computer is possible via USB or Ethernet port. The data sent to a PC computer can be processed with sophisticated THERM v50 software which offers various analytical functions to process temperature distribution data including charts, histograms within user-defined regions and report generator.



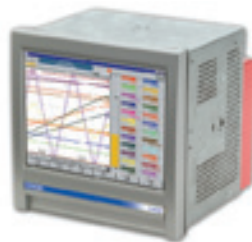
VIGO SYSTEM

Tel. +48-22-6660145 • Fax +48-22-6660159

For SLI: enter 21937 at www.tim-info.com/ien

Digital Recorders paperless

The Foxboro 6100 Series paperless data recorders feature extended input capability to communicate with up to 32 slave devices, providing up to 176 inputs. The slave devices can be used for data acquisition for variable process information including pressure, flow, temperature, and electrochemical analysis such as pH and conductivity measurements. Slave units can also provide remote access to legacy product data, and combined recording and process control functionality. The process value input can be divided between as many as 12 different groups for a broad range of data viewing and reporting. The Foxboro 6100 can be used in stand-alone applications or easily integrated into a larger system. Adaptable functionality allows the series to operate as a Modbus master or slave over both serial and Ethernet connections at the same time. Slave devices can be connected to any of the ports and data recorded and made available to supervisory systems.



INVENSYS

Tel. +44-1293-526000 • Fax +44-1293-416104

For SLI: enter 21877 at www.tim-info.com/ien

Industrial Camera 16mpixel, GigE-interface

The svs16000-GigE is GigE-Vision standard compliant when used in single tap mode. The optional second Ethernet connection is useful when speed limitations of 1Gigabit need to be overcome i.e. when the bandwidth should be doubled. This feature is especially reasonable when more than 8 bits are needed. The progressive-scan camera has a resolution of 4904 x 3280 pixels and uses an Interline-Transfer-CCD from Kodak with a sensor diagonal of 43.3mm. The ultra-high-speed version of the camera has a frame rate of up to 5 full images/second, in partial-scan mode images with fewer lines can be read out at considerably higher speed. Binning with 2 x 2 pixels is also possible. Camera configuration software allows the user to adjust various camera parameters such as free-running or triggered. An SDK is also provided.



SVS-VISTEK

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For SLI: enter 21198 at www.tim-info.com/ien

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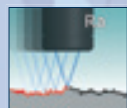
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For SLI: enter 21188 at www.tim-info.com/ien

Model GY series

Magnetostrictive Displacement Transducers



Model GY series are absolute type, high accuracy and non-contact linear sensors employing magnetostrictive phenomena. Compact mini series, GYcRP series which enables alarm, velocity output, Electronic all-in-one GYcAT series, $\phi 25 \times 22.5$ mm profile GYKM series, GYDC-07 controller presenting 5 μ m resolution, all our line-up can answer for your requirements in variety.

- Main Specifications**
- Stroke ...max 7500mm
 - Linearity ...less than 0.05%FS
 - Resolution ...less than 0.01%FS
 - Output ...Analog/digital
 - Allowable pressure ...max 350bar(probe)

- Typical Application**
- as positioning sensor for advanced industrial machinery.
 - as displacement transducer that can be installed inside hydraulic/pneumatic cylinders.
 - as a high linearity liquid level detector for a wide range of applications.

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For SLI: enter 16059 at www.tim-info.com/ien

Gas Detector

for continuous monitoring

The Polytron 3000 gas detector can be used to monitor the presence of a specific gas such as ammonia, carbon monoxide, chlorine, hydrogen sulphide, nitrogen dioxide, nitrogen monoxide, oxygen, or sulphur dioxide. Comprising two components - a docking station and a transmitter - it enables the fast removal and replacement of like-for-like sensors that are equipped with a data memory storing calibration information. The docking station can be pre-installed on walls and pipes without special mounting plates and, at commissioning, can be easily connected to the transmitter by a quick-lock mechanism. Designed to accept a pre-calibrated sensor, it also features digital temperature compensation and an LCD display. Weighing 800g, the Polytron 3000 measures 175x145x135mm and can be operated in temperatures from -40 to 65°C with relative humidity of 0 to 100% and pressures from 700 to 1,300mbar. Approvals include UL, CSA, ATEX and the CE mark.



DRÄGER SAFETY

Tel. +49-451-8820 • Fax +49-451-8822080

For SLI: enter 21900 at www.tim-info.com/ien

Fire Detection Devices

approved to actuate fire safety system

Approved to UL, ULC and FM, each Detect-a-fire heat detector is individually calibrated and tested to meet or exceed these requirements. The accuracy in sensing surrounding air temperatures, regardless of the fire growth rate, provides a unique advantage over both fixed temperature and rate-of-rise types of detectors. Detect-a-fire units also feature a very wide operating temperature range of 60-385°C. The devices feature an outer shell made of rapidly expanding alloy which closely follows changes in the surrounding air temperature with inner struts of a lower expanding alloy. The secret of the unit sensitivity is in the design, with the inner struts - sealed inside the shell - following temperature changes more slowly by resisting thermal energy absorption; making the devices susceptible to false alarms.



FENWAL PROTECTION SYSTEMS

Tel. +1-508-8812000

For SLI: enter 21426 at www.tim-info.com/ien

Email Alert Sensor

temperature and humidity alerts in realtime

The EL-USB-RT is a USB enabled temperature and humidity sensor designed to send email alerts of temperature or humidity readings that exceed acceptable conditions. The device, which is connected to a PC via a USB port, is supplied with dedicated software that provides a real-time indication of ambient temperatures between -10 and 60°C and humidity between 0 and 100%RH. These, together with a calculated dew point, can be viewed as either a constantly updated graph, or a numerical indication of the last reading taken. Users can assign high and low alarms for both temperature and humidity, and the software can be configured to send email alerts as these levels are exceeded. This feature is useful for condition monitoring, where keeping the equipment in a controlled environment helps eliminate downtime and minimises the risk of damage.



LASCAR ELECTRONICS

Tel. +44-1794-884567 • Fax +44-1794-884616

For SLI: enter 21397 at www.tim-info.com/ien

Multicomponent Analyser

controls and monitors up to 15 compounds

The MCA 100 analyser features a NDIR Spectrometer (with a Patent Pending filter system technology). A MP cell, control computer and user interface with keyboard and touch screen monitor. It can be configured to detect at ppm, mg/m³, per cent level: CO, CO₂, CH₄, NO, NO₂, N₂O, SO₂, HCL, HF, THC (CH₄ based), H₂O, NH₃, Formaldehyde, H₂S, and O₂ (with integrate cell). The analyser controls and monitors simultaneously flue gas measurements up to 15 different compounds. The values determined are displayed on screen, stored on the computer and transmitted to the interfaces. The NDIR device enables bi-frequency and gas filter correlation procedures to be used simultaneously. Two important features of the light source (an infrared emitter) are its high energy output and long service life. The light emitted passes through the chopper wheel, the MP cell, the Special filter wheels which use GFC and OFC technique on a 2 stage PbSe detector.



ETG RISORSE E TECNOLOGIA

Tel. +39-0141-994905 • Fax +39-0141-994971

For SLI: enter 21851 at www.tim-info.com/ien

Valve Testers

for servo and proportional valves

The Universal series of portable testers are designed to allow manual control of most types of servo and proportional valves. This solves the common problem of deciding if the valve is the cause of a problem, or if it is the machine's electronic controller. They were designed to assist in the quick troubleshooting of servo systems. The testers should prevent functional servo valves being unnecessarily sent for repair when maintenance engineers are unable to localize the fault. The testers are available in 3 versions, The basic model is suitable for older types of servo valves, and the most advanced model features an integrated XY storage scope link to an external PC. In addition to checking the valves basic operation this 'XY' feature enables many of the valves characteristics such as accuracy and repeatability to be measured.



BMC CONTROLS

Tel. +44-1242-604040 • Fax +44-1242-603987

For SLI: enter 21180 at www.tim-info.com/ien

Measurement Loops

for pH and oxygen measurement

The Digital ISM series pH and Oxygen measurement loops are easy to maintain and allow cost-efficient predictive maintenance. The ISM (Intelligent Sensor Management) technology allows users of equipment to reduce the maintenance costs of loops, while increasing the safety of the production process. Sensors are continuously monitored for defects and wear, and anticipating failure before it happens. Whereas conventional sensors need careful and time-consuming calibration in the field, sensor replacement with ISM sensors pre-calibrated with the lab calibration tool takes place in seconds. By delivering online pH and DO sensor status data to the transmitter, a measurement loop is more reliable and generates less maintenance costs. For pH loops, predictive maintenance is easy with the adaptive calibration timer that calculates the time to the next calibration, based on the actual sensor load, and the real-time wear of the sensor. It enables electronic documentation of the sensor operation, thereby reducing errors and time-consuming paperwork.



METTLER-TOLEDO

Tel. +41-44-9442211 • Fax +41-44-9443090

For SLI: enter 21850 at www.tim-info.com/ien

Sound Level Meter

for elusive tonal noises

The 2250 sound level meter provides simultaneous measurements of the LAeq - as well as other broadband parameters. It provides on-the-spot calculations for tone-corrected rating levels and the results are displayed in accordance with ISO 1996-2 Annex C. The meter is user-friendly with a large dynamic range and frequency resolution allowing the operator to simply position the analyzer in an appropriate location and start measuring. The tonal assessment tool is also compatible with its meter's sound recording tool.



BRUEL & KJAER

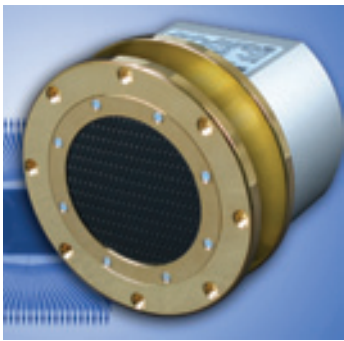
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☎ For SLI: enter 21966 at www.tim-info.com/ien

X-ray Detector

with 11Mpixels

The CCD-11000XR is a high resolution x-ray detector that achieves a resolution of higher than 25Lp/mm, being read out with up to 6 frames/sec. Owing to the high resolution of the detector, less expensive x-ray sources can be employed, in order to achieve the same system resolution. The sensitive sensor is protected by integrated fibre optics and is therefore suitable for an energy area of 30 - 150kV.



VDS VOSSKÜHLER

Tel. +49-541-800840 • Fax +49-541-8008410

☎ For SLI: enter 21374 at www.tim-info.com/ien

Industrial Displays

accurate and robust

The PReview 5714 and 5715 displays have been designed with focus on flexibility, ease of use and reliability. The six variants of these models cover hundreds of applications and are designed to receive current, voltage, temperature and potentiometer signals. The displays accept a supply voltage of 21.6...253 VAC / 19.2...300 VDC and are also able to supply a 2-wire transmitter. One can choose between 0, 2 or 4 relays in combination with 0 or 1 analogue output. Configuration is performed via the display front. The menu features scrolling help texts in 8 languages which guide the user through all the configuration steps.



PR ELECTRONICS

Tel. +45-8-6372677 • Fax +45-8-6373085

☎ For SLI: enter 21849 at www.tim-info.com/ien

Transducer

standard or rugged

Offering an easy to use but accurate means of measuring displacement from a fixed point, the DWT transducer is based on the draw wire principle. The transducer body can be bolted to a reference point and the draw wire attached to the moving part of the system, allowing point-to-point measurement or even measurement around corners. The draw wire is plastic coated and has a spring-loaded reel to maintain cable tension.



R.D.P. ELECTRONICS

Tel. +44-1902-457512 • Fax +44-1902-452000

☎ For SLI: enter 21206 at www.tim-info.com/ien

Gigabit Ethernet Camera

up to 2k pixels

This runner camera series features seven new line scan models with either 1024 or 2098pixels and a range of line rates up to 59kHz. The premier member of the runner series is a tri-linear CCD colour line scan camera employing the same sensor at the same speed as the L301kc, but also offering the advantages of a GigE Vision-based camera. Three independent CCD lines with 2,098pixels per line collect the colour information at a 9.2kHz line rate.



BASLER VISION TECHNOLOGIES

Tel. +49-4102-4630 • Fax +49-4102-463109

☎ For SLI: enter 21209 at www.tim-info.com/ien

Handheld Data Collector

with ATEX Zone 1 certification

The Marlin-Pro IS is a handheld ATEX Zone 1 data collection and analysis tool, which is reliable, rugged mobile computer designed to capture mission-critical machinery, inspection and process data. The instrument's ATEX Zone 1 certification ensures the product meets the safety requirements for use around flammable gasses, vapours, liquids, dusts or fibres.



SKF

Tel. +44-1582-496364 • Fax +44-1582-504203

☎ For SLI: enter 21870 at www.tim-info.com/ien

Control Panel

19", thin, vertical design

With its compact 462x360mm angular design and 57mm depth, the ETV 1961 is suitable for mounting in the control closet as well as direct integration into the machine casing. The integrated VARAN bus allows simple and flexible connection of periphery devices and I/Os. Several interface connections are already on board. An internal Compact Flash serves as the storage medium for the operating system, application and user data.



SIGMATEK

Tel. +43-6274-43210 • Fax +43-6274-432118

☎ For SLI: enter 21897 at www.tim-info.com/ien

Panel Bargraph Indicator

with zerospan adjustment

The LIN31 is an electronic current and voltage bargraph indicator that may be used for process value evaluation in wide range of industrial applications. It is especially suitable for liquid level and pressure indication. The indicator has 0 - 100 per cent scale in vertical or horizontal versions. The 5 input ranges are user selectable. "0" and "100%" values may be separately adjusted within each input range. The device can be powered from DC or AC low voltage supply with full galvanic isolation. The LED bargraph is typically green, but may be assembled in red or yellow.



SEM

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See further Information at:
www.weidmueller.de/IndustrialEthernet
ie-support@weidmueller.de

Weidmüller

☎ For SLI: enter 20748 at www.tim-info.com/ien

Advanced Network Devices

Pressure Gauge

very rugged

The XP2i-DP is a very rugged, intrinsically safe, ATEX certified, long term vacuum measurement. The gauge features a burst disc which protects the sensor from over-pressure on the low side connection. Rather than destroying the sensor over-pressure will destroy disk, which can be replaced easily. The gauges are tested and calibrated inside environmental test chambers using computer controlled pressure controllers. They are CE certified and are manufactured under a ISO 9001 registered quality system.

CRYSTAL ENGINEERING CORPORATION
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Fax +1-805-5955466

Enter 21449 at www.tim-info.com/ien



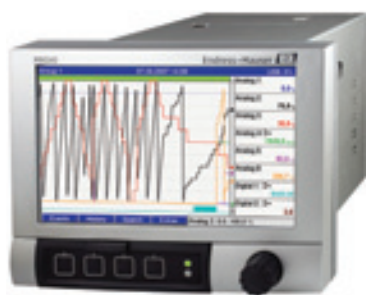
Graphic Data Manager

solution and system component

The Memograph M offers high resolution 7" TFT display, modular construction and intuitive operating system. The device internally records, stores and analyses up to 20 process signals. It can, however, be expanded to 40 channels when operating using Profibus or Modbus. All data is stored, totally manipulation secure, internally on a 256MB memory and additionally on an external storage medium such as a USB stick or SD card.

ENDRESS+HAUSER
Tel. +41-61-7157347
Fax +41-61-7157301

Enter 21181 at www.tim-info.com/ien



Weight Controller

has Profibus DP communications

Only three inches deep, the HI 4050 general-purpose weight controller is now available with Profibus DP network communications. The Profibus interface has passed testing and is certified by Profibus Nutzerorganisation. The HI 4050 weight controller includes Waversaver to eliminate the effects of surrounding vibration for fast, stable weight display, C2 electronic calibration without test weights, a Secure Digital (SD) based Secure Memory Module card for fast transfer of configuration data, and Integrated Technician for system diagnostics and troubleshooting.

HARDY INSTRUMENTS
Tel. +1-858-2782900
Fax +1-858-2786700

Enter 21061 at www.tim-info.com/ien



Temperature Meter

in wall-mounted case

The SRT-N118 temperature meter features easy operation, functional programming menu and a clear 4-decade, 20-millimetre LED display. Tight case with high protection class (IP 65) makes it an ideal choice for heavy-duty applications. 1 or 2 relay (or OC) outputs enable adjustment of the level of the measured signal. These outputs can be controlled according to one or two threshold values. The settings can be changed without opening the tight case, by an infrared remote control.

SIMEX
Tel. +48-58-7620777
Fax +48-58-7620770

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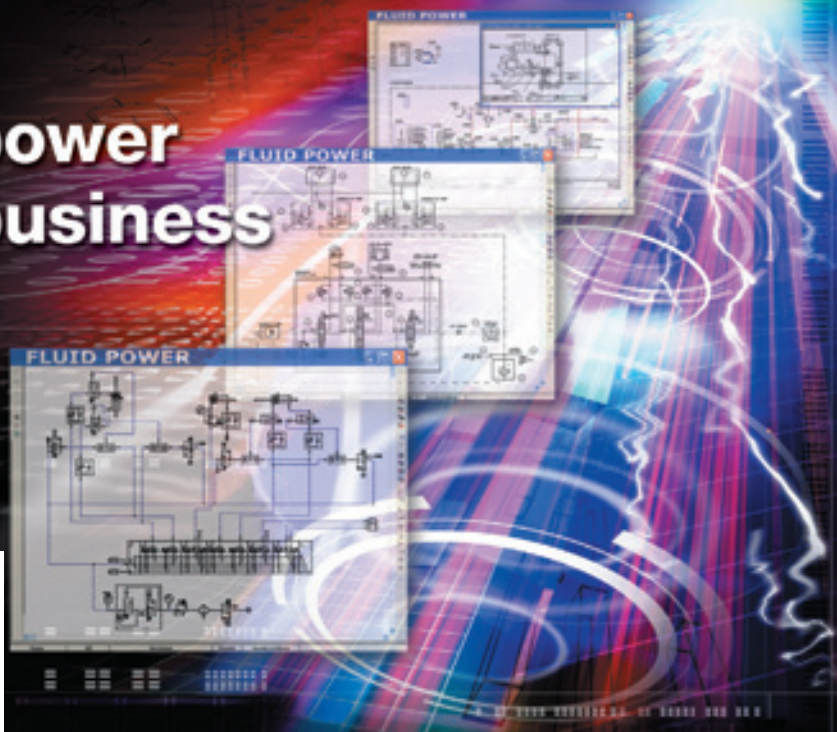


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Enter 20786 at www.tim-info.com/ien

In-line Temperature Transmitter

adds 4-20mA loops using existing sensors

The ILTX in-line transmitter is a small plug-in module which connects to an existing or new insulated sensor without the need for a special assembly or connecting head. It provides means of establishing a 2 wire transmission loop. The transmitter can be used as a free-mounted unit or can be surface mounted via integral fixing lugs. Connections to it are made using miniature connectors which are polarized to prevent cross-connection and colour coded to suit the sensor types. It features minimal-interaction span and zero calibration potentiometer action. A wide range of adjustment is provided by the potentiometers to allow for easy re-calibration of the 4-20mA temperature range. The 4-20mA loop powered transmitter provides an accuracy of $\pm 0.2\%$ of span for thermocouples type J, K & N and $\pm 0.1\%$ for Pt100 sensors. The output is directly proportional to the mV input signal for thermocouples and to the temperature input for Pt100 sensors.

LABFACILITY

Tel. +44-1243-871287 • Fax +44-1243-871281

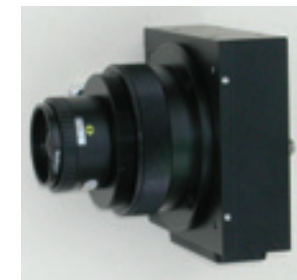
Enter 21399 at www.tim-info.com/ien



Industrial Digital Camera

7500x3 line pixels, 50Hz data rate

The TLC-7500CL is the industrial digital camera that uses a CCD linear image sensor. The 3 RGB lines are integrated in one package and 7500 photodiodes are linearly assigned per line. The photodiodes are scanned at 50MHz (0.02 μ sec) each and outputted as video signals. The scanning time per line is 160 μ sec. The video output is a Camera Link output of Base Configuration at 8-bit and Medium Configuration for 10-bit. Changing gain, offset, and the balance of even and odd number pixels as well as switching between 8 and 10 bit can be easily performed using commands from the capture board via serial communication. The camera is operated with a signal 12V DC power supply. One pixel is large enough (9.325 μ m²) to obtain high S/N image. Built in dark current correction circuit helps to obtain stable video signals even when the ambient temperature changes. Internal gain (1, ..., 7, 8x) can be selected using a switch. Exposure control function is provided.



KOATSU GAS KOGYO

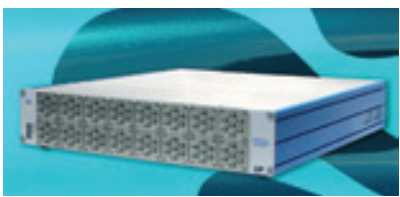
Tel. +81-6-63111371 • Fax +81-6-63111720

Enter 21264 at www.tim-info.com/ien

Switching Solution

java based front application

The 60-800 and 60-820 Microwave Multiplexer platforms each support up to sixteen 6 channel microwave multiplexers in a compact 2U form factor. The 60-800 supports 50ohm multiplexers with a bandwidth of 20GHz using SMA connectors while the 60-820 supports 75Ω multiplexers with a bandwidth of 2.5GHz using DIN1.6/5.6 connectors. The form/factor of this product allows for more efficient use of rack space when compared to fitting Microwave multiplexers in a PXI environment. Use of the 60-800 or 60-820 saves PXI slots for other instruments, potentially eliminating the need for additional PXI chassis. The LXI Class C compliant interface allows the 60-800 and 60-820 to be remotely controlled via its Ethernet port through a web browser or by the programmatic interface. The LXI provides a Java based soft front panel application that allows the user to control the switching matrix without time consuming installation.



PICKERING INTERFACES

Tel. +44-1255-687900 • Fax +44-1255-425349

For SLI: enter 21432 at www.tim-info.com/ien

Intelligent Minidrive

with CANopen

The IBL2401 is a compact intelligent minidrive based on the MotionChip DSP Control Technology. The device is 58x44x16mm and weighs just 60g. Despite these minimal dimensions it embeds motion controller, drive and PLC functionalities in the same compact unit and controls brushless, step, DC or linear motors up to 25W (24V, 1A). The drive can be mounted right beside the motor, all cables and maintenance thus being significantly reduced. Motion programming can be done from a CANopen master via a PC/PLC using the appropriate motion library, or directly at drive level, using the built-in motion controller and the EasyMotion Studio platform. Its embedded motion controller uses the same high-level motion language for all motor versions, making their technology differences transparent to the user. The unit is equipped with several sensors: incremental encoders, digital and linear Halls. Communication can be done over CANopen, CAN, RS-232 networks, or Ethernet through an external adapter.



TECHNOSOFT

Tel. +41-32-7325500 • Fax +41-32-7325504

For SLI: enter 21372 at www.tim-info.com/ien

Safety Switches

twin-headed, IP67-rated

Double-headed versions of the STP and SGP safety switches are available with robust metal actuating heads and internal cams suitable for demanding applications involving high locking forces (up to 2500N). The SGP Twin is supplied without guard locking. Manual padlocking is available, however, to ensure that the switch actuators cannot be removed from the switch head. The second switch is the STP Twin which incorporates guard locking, an independently operated electronic shot-bolt mechanism which can be key operated or automatically released when a monitored machine has stopped or is otherwise safe. The mechanical key release feature can be used as a lockout for the guard locking function to prevent unintentional guard locking. This ensures that personnel are not trapped within a machining or production cell if a safety door is accidentally closed. Optional LED indication showing the door and solenoid positions is available for the STP Twin switch.



EUCHNER

Tel. +49-711-75970 • Fax +49-711-753316

For SLI: enter 21431 at www.tim-info.com/ien

On-axis Lights

illumination of flat surfaces

On-axis lights provide optimal illumination of an inspected part by delivering collimated illumination in the same optical path as camera. These lights provide even, diffused illumination of flat, reflective surfaces perpendicular to the camera. The lights are available in sizes of 100x100mm or 50x50mm and a variety of specialty sizes. Models are available with infrared or visible red, green, white or blue LEDs, and all models offer continuous or strobed operation through a dedicated input line. In addition, on-axis lights are available with glass dust covers for protection in dirty, dusty plant environments.



BANNER ENGINEERING

Tel. +32-2-4560780 • Fax +32-2-4560789

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Swing Handles with IP65 protection

The 1180 swing handles offer style and functionality for specialist cabinets, while the 1160 with simplified components is an economy model. These swing handles are purpose designed for electrical cabinets, feature IP65 protection and accept a full range of locks including profile keys. Type 1180 has a black powder coated zinc die swing handle and will accept continuous rods if required, as well as connector systems. The key mechanism is cleverly covered by an integral roll back panel for additional protection.



EMKA BESCHLAGTEILE

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Fax +49-2051-273115

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HV Rack system with USB interface option



The HV Rack system with the USB interface option (USB-HV-RACK) enables users to control and monitor the system via a PC. The isolated interface is attached to the back of the system and is connected to the computer via a standard USB cable. A Windows application program is then used to control the HV Rack system. The system is a one-to-four-channel, fully featured configurable chassis that enables end users to select and specify the high-voltage power supply operating in each channel.

ULTRAVOLT

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Fax +1-631-4714696

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USB Connectors

data speeds up to 480Mbit/s



USB 1.1 and 2.0 compliant PCB mount connectors are capable of data transfer speeds of up to 480Mbit/s. A series connectors available in right angle, double or triple port configurations, as well as in single and 180 degree single and dual port flag styles. The B-series connectors are available in right angle and 180 degree versions. Targeting PC, PDA, video console and KVM (Keyboard, Video, Mouse) manufacturers and other PC peripherals, the connectors are ideal for applications requiring plug-&-play or 'hot swap' capabilities.

GTK

Tel. +44-1344-304123

Fax +44-1344-301414

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Hardware Systems for data acquisition



The cRIO-9072 and cRIO-9074 systems extend the family of NI FPGA-based deployment platforms, including PXI, PC and standard CompactRIO hardware that share a standard embedded hardware architecture combining a powerful floating-point processor, a reconfigurable FPGA and I/O modules. Using this standard architecture and LabVIEW tools, engineers can rapidly design and prototype industrial monitoring and control machines and embedded devices with flexible, high-performance hardware.

NATIONAL INSTRUMENTS

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GSM/GPRS Module supports up to 14,400bps



The NM-GPRS/GSM is a network expansion module for the NPort 6000 series which allows access to the NPort 6000 device server and attached devices over both Ethernet and cellular networks. The module can be used to provide backup connectivity, remote access and management and SMS alerts. The NM-GPRS is a quad-band GSM/GPRS Class 10 modem which in circuit-switched mode supports up to 14,400bps.

MOXA

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Servomotors

high power to frame size



AKM motors have a high power output for a given frame size as well as low inertia rotors for high dynamic performance. They exhibit very low cogging. The AKM has 7 flange sizes and several winding options with optional feedback systems provide maximum flexibility for machine design. Due to a special production method they are produced in the shortest possible time. The process facilitates the delivery of different frame lengths, winding versions, fixing methods (IEC-NEMA-JIS), various feedback systems and connection methods without increasing lead-times.

DANAHER MOTION - PORTESCAP

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Dry Screw Pumps

optimum ultimate pressure



The HeptaDry line of dry pumps is suited for low- and medium-vacuum applications. These pumps are designed for all areas in which oil-free vacuum is required. Rugged and dependable, they offer pumping speeds of from 100 to 600m³/h. These pumps are suitable for use as stand-alone pumps for processes of up to 10-1mbar. When used in combination with roots pumps, they supply an ultimate pressure of up to 5 x 10-3mbar. The internal compression makes for low energy consumption. The design and slow speed of these pumps is gentler to bearings and seals.

PFEIFFER VACUUM
Tel. +49-6441-8020
Fax +49-6441-802202

Enter 20793 at www.tim-info.com/ien

Abrasive Saw

PC-controlled

The model K30E abrasive saw features a 30-36" abrasive wheel, 50HP PC-controlled hydraulic power down feed for smooth consistent operation, LED beams for wheel wear compensation and rapid return after the cut is finished. The standard configuration is enclosed but the saw can be ordered without the enclosure and also fitted with different horsepower motors depending on the material being cut and cycle time required. Enclosed units have internal lights for good visibility, and all saws feature hydraulic clamping and a flood coolant system.



KALAMAZOO INDUSTRIES
Tel. +1-269-3822050
Fax +1-269-3820790

Enter 21889 at www.tim-info.com/ien

Ethernet Switches

with fast recovery time



VLAN, ELITE Ring, Ring Coupling, Dual Homing/Multi-Homing, are some of the key features of this series of Ethernet switches. The series offers you mix and match ports density for copper and fiber connectivity. The switches can even detect and report network problems before they seriously affect network operations. The enclosure is designed to keep working in harsh environments. Dual redundant powers inputs make for complete power redundancy.

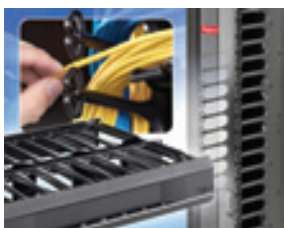
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Cable System

high cable capacity

The CableTek management system provides support for cable bundles and individual cables in standard 19" data racks and simplifies moves, adds and changes (MACs). This system offers horizontal and vertical cable managers in a variety of sizes and allows simple transitions from horizontal to vertical systems, optimizing storage capacity, reducing cable expenses and increasing time efficiency. The system maintains the proper cable bend radius for CAT 5e, 6 and 6A cables, and is available in single-sided or double-sided horizontal as well as vertical options. The pass-through holes are provided for extra wiring flexibility.



HOFFMAN
Tel. +1-763-4212240
Fax +1-763-4222178

Enter 20771 at www.tim-info.com/ien

Digital Meter

for electrical installations

The MPI-511 digital meter is designed to measure impedance of a short circuit loop, resistance of earthing, parameters of RCD switches, insulation resistance, to perform low voltage measurements of low resistances and also for phase sequence testing and measurements of alternating voltages and currents. It features RCD testing of AC, A and B type residual current circuit breakers: standard and selective in the manual or in the automatic mode. There is possibility for selection of safe voltage value threshold at 25 and 50V, and additionally at 12.5V for selective circuit breakers.



SONEL
Tel. +48-74-8583860
Fax +48-74-8583809

Enter 21990 at www.tim-info.com/ien

AC-DC Switcher

active power factor correction

The PFC FlatPAC uses VI-HAM and Maxi DC-DC converters to deliver up to 575W of power. It is a single-output power supply available with standard output voltages from 2 to 54Vdc. It operates from an input of 85-264Vac, includes active power factor correction (0.99 power factor), and meets EN61000-3-2 harmonic current limits. Internal filtering provides compliance to EN55022-A conducted EMI. It is available in low profile 34.8mm FlatPAC chassis, in either finned or conduction-cooled (CC) versions. Measuring 126x235x35mm, the universal input, RoHS-compliant this switcher has a power density greater than 9W/in³ with up to 90% efficiency.



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Connectors

improved sealing concept

The M8 actuator/sensor male and female connectors with molded cable include body styles with translucent over-molding. The design includes an optimized insert and a metal screw thread with special contours. The design change ensures the optimal connection with the best possible anti-twist protection, which will significantly decrease the chance of over tightening. Rated at IP 67/68, the connectors increase functional safety, specifically in wet environments. They feature smooth contours prevent the collection of dirt and improved sealing concept for screw/snap connectors.



LUMBERG AUTOMATION

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For SLI: enter 21989 at www.tim-info.com/ien

VARAN Manager Module

with integrated client

The VMC 052 is a special VARAN Manager module, designed for creating VARAN Multi Manager structures. Using this module, several independent systems can be connected to form a synchronised network. Complete production cells, for example, can be connected while still in operation and automatically synchronised. Varying cycle times are also possible. In addition to the standard manager function, the device has an integrated VARAN client. This client has a DPRAM over which the real time data exchange between VARAN networks can be defined.



SIGMATEK

Tel. +43-6274-43210 • Fax +43-6274-432118

For SLI: enter 21546 at www.tim-info.com/ien

Bluetooth Mini Adapter

communicates wirelessly

The LM048 Bluetooth RS232 Mini Adapter gives you wireless connections instead of conventional serial RS232 cables. Measuring measures 34x46x16 mm, it said to be the smallest RS232 Bluetooth adapter in the world. The adapter can connect with any standard 9 pin serial port to communicate wirelessly. Use your laptop, computer, PDA or mobile phone to connect through Bluetooth technology to this adapter and the application of your choice. It eliminates the conventional RS232 serial cables and gives you an invisible connection with superior freedom of movement.



DATASOFT SYSTEMS

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For SLI: enter 21398 at www.tim-info.com/ien

Illuminated Keyboard Switches

with 'no click' operation

The PS011 series illuminated keyboard switches are available with tactile feedback or silent 'no click' operation. The high-brightness range features: three button cap size options; single or bi-coloured LED illumination; and long (4.5mm) travel. 12, 15 or 17.4mm² caps can be customized using legends, whilst the on-board PCB real estate requirement is a compact 15 x 15mm. The operating temperature range is -20 to 70°C, and the life is 1 million operations minimum.



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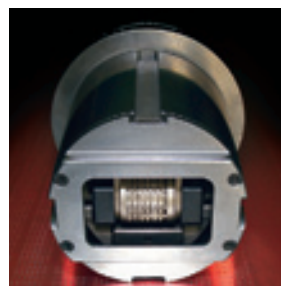
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Stamping Tool

for sequential or fixed numbers

The Mate Enumerator Sequential Numbering Tool has been designed to stamp sequential serial numbers, dates and codes on fabricated parts. At the core of the Mate Enumerator assembly is a robust spring-loaded stamping head with six numerical stamp wheels. Each wheel features the numbers from 0 to 9 engraved around the circumference. The spring loaded advancing arm of the stamping head engages with a rocker arm that advances the wheel heads one number at a time, from 000000 to 999999.



MATE PRECISION TOOLING

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Polarizer Rotator

360° continuous rotation

AG-PR100 features an Agilis piezo step direct motor which provides ultra-high adjustment sensitivity and convenient remote operation. The Agilis piezo motor is directly coupled to the moving carriage with no intermediate screw or gear. Precision motion is achieved by a proprietary ball-bearing that ensures better than 100µrad wobble. When idle, the holding force of the motor locks the position for true set-and-forget, long-term stability.



MICRO-CONTROLE SPECTRA-PHYSICS

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For SLI: enter 21904 at www.tim-info.com/ien

Fanless Computer

for harsh environments

ReadySystem Fanless features a choice of Ampro ReadyBoard SBC up to 1.4 GHz Pentium M processor and all electronics in a compact housing, 236x261x85mm. It includes a robust set of I/O with a VGA DB15 output, USB2 ports, RS-232 serial ports on DB9 connectors, audio, PS/2 keyboard and mouse, and up to two Ethernet interfaces. Optional additional serial and USB ports are available. The system allows the integration of up to 2 PCI-104 or PC/104-Plus cards.



AMPRO COMPUTERS

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For SLI: enter 21192 at www.tim-info.com/ien

Dual Pedestal Reel

high strength in compact design

The DP7000 Series dual pedestal base offers the stability of a dual pedestal reel in a compact, yet strong design. It features a two-piece, non-welded, interlocking base that won't vibrate apart. The interlocking steel-formed and stamped base design makes the base assembly especially strong, compact and resistant to vibration. These reels have successfully passed independent testing to mil-spec standards and are proven to stand up to heavy vibration.



REELCRAFT

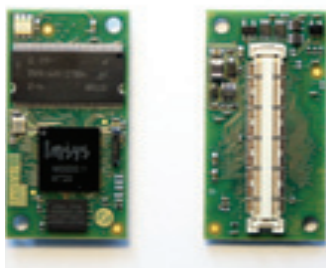
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Protocol Controller

with complete software platform

With a size only $\frac{1}{4}$ of a business card, 24x45mm, the IM3220 promises good sync quality, less power consumption and lower memory needs. The component combines the best features of traditional CISC architectures and efficient use of resources with FPGA flexibility for a predefined application – time synchronisation. The IM3220 MCU supports two 10/100 Ethernet ports, three UARTs with 920kbit/s, I2C or SPI port, and eight DMA channels with a sustained 83MB/s throughput.

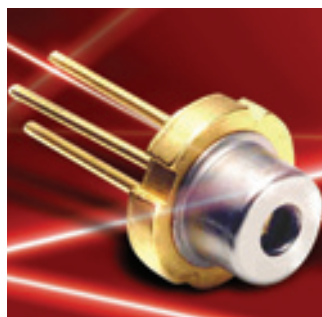


IMSYS TECHNOLOGIES
Tel. +46-8-59411070 • Fax +46-8-59411089
☎ For SLI: enter 21434 at www.tim-info.com/ien

Red Laser Diode

emitter size of just 40µm

The red laser diode ML520G51 appears bright to the human eye, and it is capable of emitting the deep reds in the 640NM range. Furthermore, it offers a maximum output power rate of 150mW. It has been designed to operate at a wall-plug efficiency of 23%, and thus will reduce device power consumption. Due to its low thermal output power this laser diode is integrated in a small hermetically sealed 5.6mm diameter TO-Can package.

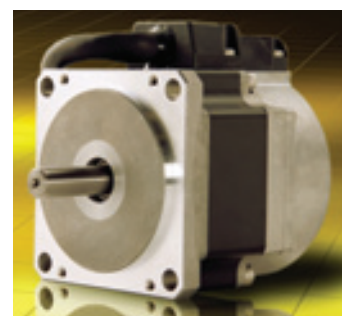


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☎ For SLI: enter 21428 at www.tim-info.com/ien

Brushless AC Servo Motors

peak torques of up to 3.8Nm

The BSM R-series motors are packaged in small 40 and 60mm square bodies. This provides developers with a selection of continuous stall torque ratings spanning 0.16 to 1.27Nm, and peak torques from 0.48 to 3.8Nm. Power and feedback connections to the motors are made by long flying leads. Users can optionally specify motors with a resolver or 2000 PPR encoder fitted for positional feedback. A further useful option is the addition of a 24Vdc brake.



BALDOR
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Pressure Transducers

345mBar to 4,137 bar

The TJE pressure transducer features a true gauge design utilising a second welded diaphragm hermetically sealing the strain gauges from external contamination. An absolute version also has an all welded vacuum reference chamber ensuring long term stability. Versions available cover the range from 345mBar to 4,137 bar. In situations where integral electronics are not appropriate they can be used with an inline amplifier such as the RDP S7DC for greater flexibility and security.



R.D.P. ELECTRONICS
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☎ For SLI: enter 21450 at www.tim-info.com/ien

Optical Cables

accelerate 10G server connectivity

The Laserwire family consists of the Laserwire cable, a high density electrical connector and 10G Ethernet adapter modules to facilitate adoption into legacy transceiver ports. Laserwire utilises fiber optic technology for the transmission of data while reducing the weight, density and power consumption of copper wire. The Laserwire electrical connector was specifically developed for high density applications and can support large cluster configurations, including 48 port 1U switches. The connector can also be mounted in space-constrained LOM (LAN on motherboard) designs.



FINISAR
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☎ For SLI: enter 21216 at www.tim-info.com/ien

Shielded Plastic Connectors

IP65 rated

The C16-3 EMI Connectors combine the features of metal and plastic in one product. The new carbon fibre filled plastic material shows good EMI shielding abilities and therefore can be used in applications that were so far only considered for metal connectors. It uses built in fibres to achieve the shielding performance. Major benefits are lower cost and weight reduction compared to full metal connectors with equal shielding characteristics. The housing shows good conductive performance and also durability for harsh environment applications.



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Pressure Transmitter GC51

- Accuracy 0.25 %
- Ranges up to 500 bar

Low dp-Transmitter GC52

- Accuracy 0.5 %
- Ranges from 10 to 1000 mbar
- Static pressure 20 bar

dp-Transmitter GC55

- Accuracy 0.5 %
- Ranges up to 20 bar
- Static pressure 2-times F.S.

Ashcroft's new pressure transmitters feature a digital display for local indication and a user "turndown" capability for re-ranging. Two ultra-compact configurations are now available: GC51 gauge and compound ranges to 500 bar and GC52 wet-wet dp with ranges from 10 to 1000 mbar and bi-directional ranges.

The new Ashcroft® GC55 wet-wet differential pressure transducer monitors high differential pressures through 20 bar in HVAC hydronic cooling and heating systems and pump controls.

ASHCROFT®

www.ashcroft.eu

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Ashcroft Instruments GmbH

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Servo Controllers

for power ranges below 1kW

The b maXX 2x00 series mini servo controllers have been devised for the power range below 1kW. Equipped with the key features of a larger servo drive, these drives have been designed to ensure uniform device operation via a synchronised fieldbus or a homogeneous service interface. As a result, the b maXX 2x00 products can be fully integrated into a machine's automation architecture, providing consistent diagnostic capability. The system can be used in both stand-alone and distributed network operation. In addition to the classic b maXX 2400 control cabinet, b maXX 2x00 mini servo drives are also available as a compact unit consisting of a servo motor, sensor technology and electronics – the b maXX 2300. The drives are compatible with the b maXX 4000 and b maXX 3000 servo controllers in terms of handling, key functions, communication and operability.



BAUMÜLLER

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Positive-drive Belts

hygienic and easy to clean

The Volta Positive-Drive Line includes three positive-drive belt types that are hygienic due to its homogenous material characteristics and smooth operating surfaces, ensuring effective and easy cleaning. The SuperDrive has integrated teeth on the drive-side which function as a positive-drive and guide for the belt. This in turn, prevents slippage, belt tension and off-tracking, belt and product damage. It can be used in a variety of conveyor types such as trough, Z-elevator, center-drive conveyors, among others. The DualDrive belt is designed for replacement of currently running modular applications. It replaces these modular belts with no retrofit requirements on existing sprockets. This belt may be used as cleats when the teeth are facing up. The DualDrive SPTM requires a lighter conveyor construction since it works with a 50mm pulley diameter and requires minimal tensioning. This relatively small pulley provides a tight transfer of the end-product between conveyors, reducing product loss and overall conveying costs.



VOLTA BELTING TECHNOLOGY

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Micro Annular Gear Pumps

deliver precise flows

The HNP range miniature, ultra low-flow, positive displacement, micro annular gear pumps are capable of dispensing a wide range of liquids with precise, smooth, pulse-less flows. The ultra-compact pumps deliver liquids with a precision of CV< 1 per cent across a range of flow rates from as little as 0.25 microlitres up to 1,152 ml/min. The range comprises four series of pumps with the dosage volumes covering the sub-micro litre to litre range for both non-lubricating and highly viscous liquids. These pumps are rotary pumps constructed with an externally toothed internal rotor and an annular tooth external rotor, which are slightly eccentric to each other. During rotation of the rotors around their offset axis, the pumping chambers simultaneously increase on the suction side and decrease on the delivery side of the pump, resulting in a homogeneous flow rate being generated between the kidney-shaped inlet and outlet.



HNP MIKROSYSTEME

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Digital Stroboscope

portable, CE-certified

The PK2X's long-lasting flash tube delivers a flash brightness of 1,200Lux and a flash rate of up to 12,000 flashes per minute, while its rechargeable Lithium-ion battery provides a full two hours of continuous use. In addition, the PK2X can be connected to an AC power source for continuous operation, using the supplied universal voltage AC-Adapter/Charger. The PK2X is CE-certified meets the industry's toughest safety and performance standards. It provides highly accurate speed control with drift-free operation, a resolution of ± 1 RPM over the entire range and offers external triggering capability if an external sensor is used for flash rate control. The device fits easily in the a pocket or can be carried in an optional belt holster. The PK2X is well-suited for non-contact RPM measurement, as well as for inspecting moving parts by "freezing" or "slowing down" the action.



ELECTROMATIC EQUIPMENT

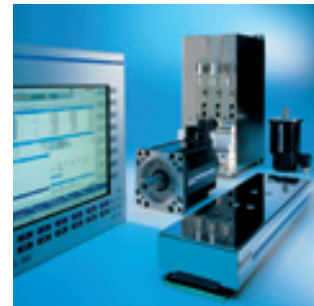
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For SLI: enter 21905 at www.tim-info.com/ien

Cycle Time Analyser

identifies bottlenecks

The MTX Cycle Time Analyser for the CNC IndraMotion records the cycle times of all production machine stations and provides users with an insight into the NC and PLC program flow. In this way, the analysis tool identifies and eliminates bottlenecks, thus enabling optimum utilisation of the machine. The MTX Cycle Time Analyser records the flow of CNC commands, PLC events, axis signals and signals from the machine's periphery, and it does so synchronously and accurately to the millisecond. Results are presented graphically by the MTX CTA in time diagrams. Synchronisation allows the recorded data to be clearly assigned and provides an overview of how the events interact. The analysis reveals any bottlenecks in the machine work flow, enabling the performance of the overall system to be increased. Analysis of the measurement results is possible directly on the control system or offline.



BOSCH REXROTH

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For SLI: enter 21456 at www.tim-info.com/ien

Hybrid Linear Actuator

size 11 double stack captive

The 28000 series (Size 11) double stack captive hybrid linear actuator are built for long life (several million cycles). It features engineering thermoplastics in the rotor drive nut and a stainless steel Acme lead screw. This actuator is available in a wide variety of resolutions ranging from .003175mm per step to .0508mm per step and delivers thrusts of up to 133 N without compromising long life. The unit is especially well suited for applications in which external anti-rotation methods would be difficult or impossible to employ. Captive linear travel ranges from 12.7 to 63.5mm. Applications requiring precise positioning and rapid motion are best suited for this motor. Typical ones include semiconductor handling, valve control, X-Y tables, hand held instruments. In addition to standard configurations, custom design this motor is also possible.



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RFS-9

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RFS-12

Riko's Level Switches are compact and simple in design. They have proven their high reliabilities in the wide range of applications. Many more types are available. The models customized and OEM designs are widely welcome. Free catalogs available!

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CE

For SLI: enter 21161 at www.tim-info.com/ien

High-voltage Isolators

AC measurement at high voltage levels

The VariTrans P 40000 TRMS (true root mean square) units measure even distorted AC signals at high voltage levels. While simple AC/DC transmitters measure mean values calibrated to purely sinusoidal quantities, this device measures true effective values, and can correctly analyze distorted sinusoidal and pulse-shaped signals. Due to a maximal crest factor of 5, the series has a wider measuring range than conventional amplifiers. The units process all common power frequencies, e.g. 16.7Hz used in railroad systems, 400Hz in ship and airplane systems, and the 50-60Hz frequency of the public power network. The calibrated switching of measuring ranges is a unique feature: 16 input/output signal combinations can be selected using a rotary coding switch on the device front. The unit's easy scalability facilitates the implementation of customer-specific solutions. Due to their 20...253V AC/DC wide-range power supply, the isolators can be used in applications all over the world.



KNICK

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Synchronous Motors

offer design freedom

The 8KS series liquid-cooled three-phase synchronous motors feature high power density with compact outer dimensions. This opens up new perspectives for the design of machines and systems. This level of freedom enables machine manufacturers to create efficient and economical solutions. Integrated water cooling enables more compact sizes and prevents the machine or the switching cabinet from overheating. Doing away with energy consuming and noisy fans saves space, reduces emissions and lowers costs. The life-span increases significantly because the motor parts except for bearings are free of wear. Intelligent connection technology for power and encoder connections using circular connectors or terminal boxes simplifies installation considerably. These motors are available in four sizes with a rated speed of 1,100 1/min to 2,200 1/min and a maximum speed of 4,500 to 10,000 1/min. The rated torque is between 8.3Nm and 605Nm.



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Boundary-Scan Controller

in USB version

The new USB version of the 3705 Explorer, JT 3705/USB is powered from the USB interface making it portable and compatible with the burgeoning laptop population. It offers two TAPs that can be fully synchronised for test purposes and is compatible with all JTAG Technologies' development tools such as JTAG ProVision and production packages such as the Stand-alone package (PSA) and the Production Integration Packages for LabVIEW, LabWindows, TestStand as well as C/C++ and Visual Basic. The JT 3705/USB can be used for structural board testing, in-system device programming (ISP) of CPLDs, and in-system programming of small blocks of flash memory data etc... Programmable output levels per TAP (1.5V to 3.6 volts) make the JT3705/USB compatible with all current and future logic families. Test clock frequency may also be programmed from 100Hz to a brisk 6MHz allowing test applications to be executed in a 'snap'.



JTAG TECHNOLOGIES

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Welding Power Supply

easy to operate

The welding system M200 power supply offers ease of use, portability, and 200 amp capability, all at a weight of less than 23kg. A high-resolution, 307mm colour industrial touch screen gives a simple, intuitive pathway to enter weld programs. Users can choose from one of three forms to enter weld programs, including automatic weld schedule programming. The automatic shield gas control simplifies set-up of shielding gas, requiring no use of a separate flow meter. Multi-language capability is built in to the device, requiring no separate programming or special ordering. Universal voltage input (100 to 230Vac) requires only a cord/plug change to accommodate an input voltage. The unit includes four USB ports, Ethernet port, USB device (output) port, VGA output, and serial port. All gas and electrical connections, plus the integral, high-speed thermal printer are easily accessed from the unit's side panels.



SWAGelok

Tel. +1-440-33495934 • Fax +1-440-3495806

☎ For SLI: enter 21907 at www.tim-info.com/ien

Communication Module

wireless to serial communication gateway

The MT-202 module is a solution for wireless integration via GPRS network of remote intelligent devices (e.g. PLC controllers, I/O stations, measuring devices, operator panels) equipped with serial port RS-232/422/485. It can be used as wireless serial port, but it can also play a role of a local Master querying periodically an external device for user defined resources (e.g. inputs, outputs, analogue inputs, internal registers and flags). In such case the device creates in memory a mirror of the external resources and detects alarms, state changes, analogue value changes and fulfilled logic conditions incorporating raw and calculated values. Data are transmitted via GPRS or as SMS message. Supported protocols include Modbus RTU, NMEA 0183, M-BUS. Flex Serial mode provides capabilities of application program based protocol handling. It features industrial grade design, integral GSM/GPRS modem, user programming capabilities and easy to use configuration tools.



INVENTIA

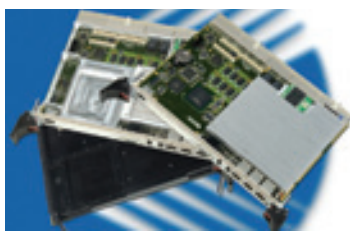
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PCI Board

in three levels, resistant, rugged

The CP6001, a 6U CompactPCI PICMG 2.16 compliant board with three rugged levels, is based on the Intel Core Duo/ Core 2 Duo processor and mobile chipset. It features high computing and graphic performance with a low thermal design power and a complete set of data, communication and multimedia interfaces. The passively cooled device featuring up to 4GB of soldered RAM and soldered application flash comes in three rugged levels, defined as R1, R2 and R3. All three versions are available with E2 capabilities (extended temperature range from -40 to 85°C). The R1-version is designed for standard application requirements in air-cooled environments. The R2-version is ruggedized for high shock and vibration environments in accordance with the VITA 47 EAC6 specification. The R3-version is fully conduction cooled and meets VITA 47's ECC4 requirements. It supports Linux, Windows XP, XP embedded and VxWorks 6.x.



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Flexible Box PC

for continuous industrial operation

The rugged industrial Simatic Box PC 827B is designed for 24-hour continuous operation at ambient temperatures up to 55°C. It is available with Intel Core2 Duo or Celeron M processors. The PC has one PCIe(x4) slot and four PCI slots for expansion cards. The unit is suitable for high-speed measuring and control tasks, or human machine interfacing applications. The Intel GMA 950 Graphics Media Accelerator has been integrated for high-speed display generation. It is scalable, with a DDR2-677 main memory configuration of up to 4GB, and SATA hard disk drives up to 160 GB. The device has two teaming-enabled Gigabit Ethernet connections and one optional Profibus interface. All interfaces and functional elements are accessible from the front. Mounting brackets and kits are available for flexible installation in diverse positions. The PC is enclosed in a full metal housing that provides high resistance to shock and vibration and high electromagnetic compatibility (EMC).

SIEMENS A&D

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Moisture-adsorbing Polymer

can be moulded and machined

The VMAP moisture adsorbing polymer materials can be moulded and machined to specific shapes to protect instruments, electronics and systems or enclosures from humidity while also removing odours and organic volatiles. Developed from a combination of polymers and adsorbent desiccants, it offers improved opportunities for preventing the damaging effects of moisture and high humidity including condensation and corrosion. Easily fixed in place using screw fasteners, adhesives or other mechanical methods, it is practical for small or large production quantities and ideal for producing low-cost prototypes. With a wide operating temperature range and high adsorption capacity that can be fully reactivated when saturated, the material also has low dusting and particle loss. Its full adsorption capacity is maintained during the moulding process, even with complex shapes needed.

BROWNELL

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Intelligent Platform

integrates motion solutions

The VersaMax MicroMotion allows users to easily integrate motion control, servos (or steppers) and low-end control into one package. The MicroMotion module supports a speed command range of 6.25 to 500k pulses per second. Up to two MicroMotion modules can be connected to a VersaMax Micro controller for a total of four independent axes. It can also be used as a standalone motion module for any controller that supports Modbus Master or Modbus TCP. The VersaMax MicroMotion is also compatible with the VersaMotion line of servos. Motion sequences can be executed one at a time via the controller or programmed in a multi-move sequence for fast efficient execution of more complex motion profiles. The motion sequence is created and modified with simple pull down menus to speed motion profile creation and changes. The user can store up to 256 moves to be executed one at a time or combined for multiple blended moves.

GE FANUC AUTOMATION

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For SLI: enter 21419 at www.tim-info.com/ien



Power Supply Units

for 48VDC

As a rule, network components with a Power-over-Ethernet function require a high-performance 48VDC power supply. This series of industrial power supply units have been developed for this purpose. Precisely-regulated output voltages and a high level of EMC interference immunity guarantee reliable, safe operation, even under sensitive load conditions. The principal safety feature is the capability of parallel – and therefore redundant – operation, which is crucial for the supply of power to applications prone to failure, such as VoIP telephony. For monitoring purposes, it is possible to interrogate the status of the power supply over an active output. At the same time, in combination with an additional integrated relay, it is possible to create a logical link between the outputs of power supply units switched in parallel. The status at any time is also shown by means of a 2-colour LED display.



MICROSENS

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For SLI: enter 21898 at www.tim-info.com/ien

Pressure Sensor

pressure range up to 0 - 2,000bar

The Precise pressure sensor utilizes advanced digital MEMS technology. It is suitable for applications such as calibrators and digital gauges that require high accuracy, low drift and high resolution. With a guaranteed total error band (all possible errors) of $\pm 0,01\%FS$, high pressure turndown ratio and an inherent tolerance to over-pressure and pressure spikes, the sensor offers high level of performance. This sensor measures pressure-induced compressive stress with a piezoresistive Wheatstone bridge integrated on a tubular silicon structure. The mechanical design of the sensing element makes it possible to develop robust and sensitive sensor solutions. Silicon single crystal structure minimizes errors due to thermal and mechanical hysteresis and prevents long-term drift. The tubular design enables mechanical de-coupling of sensing area and eliminates error. Extreme tolerance to over-pressure and pressure spikes is achieved in compressive stress operations.



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Mobile HMI

for zone 2 hazardous areas

The ProVicom MT-916-iX104C3 is a portable control panel for use in zone 2 hazardous areas. The robust system achieves protection class IP65 and complies with MIL-STD 810F. The 40GB hard disk is installed shock-proof, making data safe even if the device is roughly handled. The 10.4" TFT screen has a resolution of 1024x768 pixels. Alternatively, the device is also available with an AllVue display that guarantees legibility even in bright sunlight. Another alternative or add-on is the touch screen version. The tablet PC is operated with a pen, and the touch screen can also be operated with fingers. With an Intel Pentium M 1.2GHz processor, 256MP RAM and a 2MB L2 cache, this tablet PC has solid performance reserves for typical HMI applications. Interface design includes a type I/II PCMCIA V3.0 slot, two USB connections, and a Gigabit-compliant Ethernet port. A WLAN module permits wireless communication. The system provides a fingerprint sensor and a microphone and headphone connection.



STAHL

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For SLI: enter 21968 at www.tim-info.com/ien

Concentrator Recorder

over 20,000 records for each sensor

The LB-476 concentrator is designed for cooperation with sensors, using which the device provides power supply. It is possible to serve up to 8 sensors. Alternatively, each-one of the inputs can be used for connecting a two value signal (short circuit input). One of the inputs, in a binary mode, works additionally as an input counting the impulses (designed for attaching to a rain-gauge). Data sent through the sensors is buffered in the concentrator's operational memory and made available as the registries of a Modbus-RTU data bus. In each channel 8 measured values are served, what allows on supervision of over maximum 64 measurements. For each measured value it is possible to define a set of the alarm parameters, including: upper and lower alarm threshold, a delay in alarm functioning, time of alarm postponing. The concentrator conducts registry of the received measurement data.



LAB-EL LABORATORY ELECTRONICS

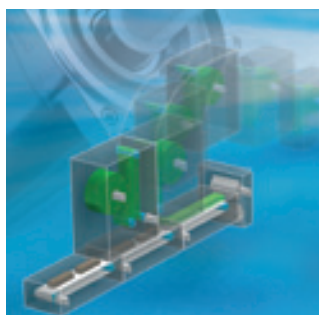
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For SLI: enter 21848 at www.tim-info.com/ien

Servo Module

for packaging machines

The iSH Servo series with flange dimensions of 70 and 100 mm combines the compact Elau SH servo motor and the necessary power electronics of the Elau MC-4 servo amplifier in a single module. These are connected directly to the PacDrive Motion/Logic controller by means of a new cabling concept and power supply. Hybrid cables run from the power supply to the servo modules. The electronics of the iSH drive can be expanded with I/O or safety functionalities using option modules. The I/O module uses the drive bus to link up to a maximum of eight sensors or actuators with the controller. The safety module integrates all expanded safety functions that are required to develop safety concepts in accordance with EN 954-1 Category 3 and PL d /EN 13849 for packaging machines as well as the existing basic functions of Safe Stop 1 and Safe Torque off.



ELAU

Tel. +49-9391-6060 • Fax +49-9391-606300

For SLI: enter 21191 at www.tim-info.com/ien

Wireless Access System

without co-channel interference

The Wireless Access System is based on the Channel Blanket approach providing mobility by combining the freedom of wireless with the simplicity of a hard-wired network. It combines voice, video and data networking and increases throughput. Access points can be anywhere and require only the simplest of installations without any set-up or configuration required. The system is easy to plan, install, test and maintain. MACs (Moves, Adds and Changes) are also easily achieved by simply altering an access point. The Channel Blanket topology means that each radio channel is used everywhere at every access point to create blankets of coverage. The result is seamless mobility with no security concerns, no roaming latency, no co-channel interference, robust customer connections that do not drop and the ability to design for a guaranteed and predictable level of service. The end result is network performance that is improved and transformed, giving universal coverage and good system capacity.



BELDEN

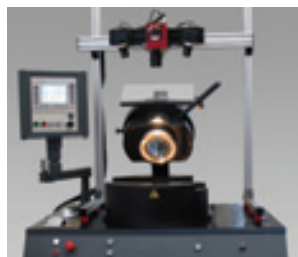
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For SLI: enter 21366 at www.tim-info.com/ien

Sheet Metal Testing Machine

evaluating mechanical deformation

The hydraulic BUP 1000 machine addresses the latest requirements of the steel industry, especially for use in new automotive applications where higher tensile strength combined with high formability has become more and more important. The machine can be used to determine the forming limit curve (FLC) and, with drawing forces up to 1000kN and a punch diameter of 100mm, meets the latest requirements of ISO 12004. The system uses digital PLC technology enabling the test to be controlled from either the Force or punch displacement measurement channel. The standard tests can be carried out and the large punch displacement and wide speed range offers a range of useful applications including small scale simulations of the complete forming process. With its remote control capability of the function display unit, and the hydraulic operation of the tool head aiding the insertion and removal of test specimens, the system offers significant and powerful benefits.



ZWICK

Tel. +49-7305-100 • Fax +49-7305-10200

For SLI: enter 21396 at www.tim-info.com/ien

Placement System

up to 4,000cph

The CSM7100-V handles components from 0402 to 33 x 33mm, and offers placement speeds of up to 4,000cph. It has a sophisticated vision capability with high speed image processing software to check BGA and fine pitch components prior to placement. In the event of a fault, such as missing balls or bent leads, the component is automatically returned to the tray. Another feature of the system is laser centering. Unlike traditional machines with mechanical centering, the CSM7100-V uses a touch-less system that does not require calibration at startup. All picked components are measured for position on the nozzle by the universal optical system and therefore placed with guaranteed precision. The CSM7100-V offers off-line programming, together with intelligent feeders and a large feeder capacity, accommodating up to 100 x 8mm taped or 160 stick fed components.



CONTAX

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WP-1000



WPX-1

New



New



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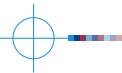





Bayonet design, also used in interchangeable camera lenses, enables easy tube replacement.

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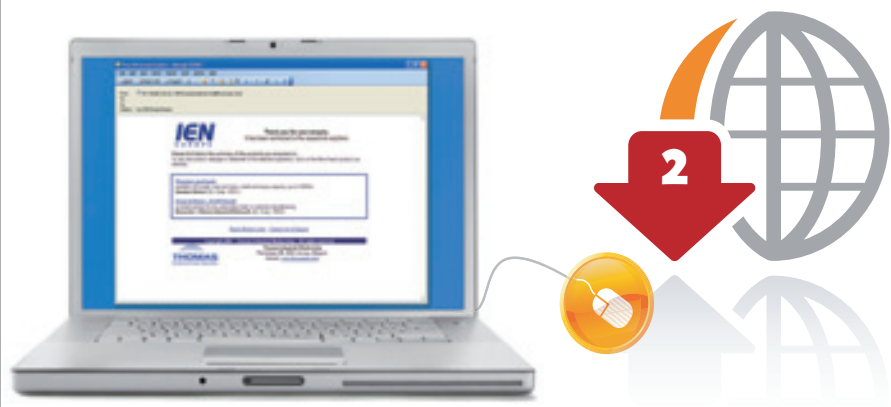
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Clamping Screws

high clamping forces with low torques

The SC screws enable high clamping forces with low torques and easy manual operation. The robust design of all components and overload capacity guarantee maximum operational reliability. Due to the geometry of the wedge clamping system, the screw guarantees a self-locking function in any clamping position and offers a tensioning stroke of up to 2.5mm. Through this, any clamping forces up to the rated value could be achieved independently of the torque. The clamping screws come with 40, 80 and 120kN clamping force and graded thread diameters of M36, M48 and M64mm, as well as a new special design type SC 80 with M80 thread and a clamping force of 160kN. For reproducible clamping force values, operation should take place using a torque wrench. The clamping screws are permanently lubricated under maintenance-free under normal conditions.



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Technology in Action: read more online at www.ien.eu/morenews

Let's go wireless!



We are all familiar with highly connected wireless networks such as mobile phone networks, but concerns about reliability, performance, and security have kept this core networking technology from making its way to the shop floor. Instead, the current generation of wireless products used in automation applications typically relies on simple transmitter/receiver pairs, offering no advanced networking. Wireless systems are quick and simple to install where standard hard wiring is not practical. They seem to be ideal for retrofitting or expanding an existing system. With the cable cost around 10-15 Euro/meter, such a system can significantly reduce installation cost.

All networks are constructed of basic building blocks. The following building blocks are used in wireless sensor networks. The node is the most basic building block in a network. Technically, every device in the network is a node, but for this purpose a node is a wireless networking device that contains one or more sensors and/or actuators and a single radio. Each radio in the network represents a single node.

A repeater allows radio signals to travel over longer distances, by receiving the signal, boosting the signal, and then repeating the signal on the transmitter side of the radio.

A router acts as a junction between two or more similar networks to allow the transfer of information between them. A gateway is a node that

interfaces with another network that uses a different protocol. It translates the information into a form the other network can understand. Since most gateways also contain routing functions, think of a gateway as two routers standing back to back and speaking different languages to their respective networks. To receive messages, each node in a network must have a unique address. The address is defined when the network is created—that is, when the radio links between nodes, repeaters, and gateways are established.

Information transmitted between addresses in a wireless network is contained in a formatted block called a packet, which consists of three elements: the header, which includes information like the address to which the packet is being sent and the type of information being sent; the payload, which is the data itself; and a trailer, which indicates the end of the packet. To reliably transmit this message, efficient networks regulate communications between ...



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Plastic Modular Belt

for heavy duty applications

The M6420 Flat Top plastic modular belt can be assembled with nylon or steel rods and is driven by solid lug tooth sprockets providing optimum sprocket engagement to ensure full heavy duty performance. The main benefits of this belt are a tensile strength rating of over 100,000 N/m (6,800 lb/ft) and a high lateral stiffness which combine to create an extremely stable conveying platform. The smart fit rod retaining system provides maximum rod retention while allowing fast repairs during general maintenance without the use of complicated tools. By using the steel rod option, belt strength is maximized ensuring a smooth operation on conveyor lengths up to 91m. Compared to traditional steel chains, the strong design allows for lower profile conveyors minimizing the space required. The use of low friction materials reduces energy consumption and eliminates the need for lubrication.



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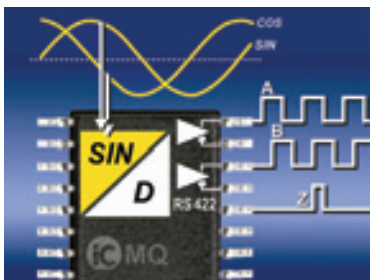
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Pneumatic Actuators

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Optical Pulse Generator

generates 100 or 500 pulses per rev



The pulse generator MFV is an optical angle sensor for length or position measurement. Frictional wheels with rubber covering measure the way and the encoder sends this information directly to the control unit. The encoder transmits 100 or 500 pulses from one revolution with a circumference of 250mm according to the chosen resolution. It can be optionally operated with 5V or 12-24V power supply. The MFV provides an NPN transistor output or a Push-Pull or Open Collector respectively.

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www.bimu-mediterranea.it

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19 – 22 February
Budapest, Hungary
www.magyarregula.hu

• **Intertool/ITU**
26 – 29 February
Kiev, Ukraine
www.msi-fairs.com

• **WIN part 2**
28 February – 2 March
Istanbul, Turkey
www.win-fair.com

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• **Lasys**
4 – 6 March
Stuttgart, Germany
www.messe-stuttgart.de

• **Maintec**
11 – 14 March
Birmingham, UK
www.maintec.co.uk

• **PTA-North West**
11 – 14 March
St-Petersburg, Russia
www.pta-expo.ru

• **Automatisierungstreff**
12 – 14 March
Böblingen, Germany
www.sindelfinger-automatisierungstreff.de

APRIL

• **Industrie**
31 March – 4 April
Paris, France
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• **WIRE**
31 March – 4 April
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• **RTS Embedded Systems**
1 – 3 April
Paris, France
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• **Analytica**
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www.analytica-world.com

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21 – 25 April
Hanover, Germany
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4 – 6 June
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www.sh-wes.com

• **Automatica**
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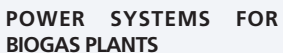
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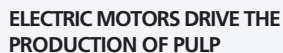
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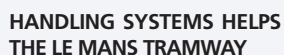
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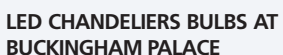
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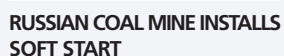
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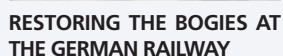
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